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10/509,742

09/30/2004

Nobuyuki Okubo

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

CARTER, AARON W

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

04/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/509,742 | Applicant(s) OKUBO, NOBUYUKI | |
| | Examiner AARON W. CARTER | Art Unit 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to papers filed on 1/2/08.

Response to Amendment

2. In response to applicant's amendment received on 1/2/08, all requested changes to the specification and claims have been entered. Claim 4 has been cancelled.

Response to Arguments

3. Applicant's arguments filed 1/2/08 have been fully considered but they are not persuasive.

Applicants argue that the prior art of Nishii and Bloomberg neglect to disclose the limitations "the determining unit determines that an extracted fragment image is a character image and the image primary drawn when the extracted fragment image has a size of a character, and the size is within a predetermined range of height and width and depends on a read resolution and a font size".

The Examiner disagrees. Bloomberg discloses determining that an extracted fragment image is a character image and the image primary drawn when the extracted fragment image has a size of a character, and the size is within a predetermined range of height and width and depends on a read resolution and a font size in column 5, line 65 – column 52. Bloomberg discloses that the read resolution of the image is reduced by preferably 16x and that the font size of a character is 4 or sometimes 8 connected components, so a fragment image with a height or

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width equal to that which provides 4 or 8 connected components or pixels is considered a character.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,467,410 to Bloomberg in view of USPN 6,501,556 to Nishii.

As to claim 1, Nishii discloses an image processing apparatus comprising:

a determining unit determining whether or not an image is an image primary drawn on the page (*column 2, lines 24-25, wherein the blank page detector correspond to determining whether or not an image of a page is an image primary drawn on the page*); and

an output unit eliminating a page not containing the image primary drawn and outputting a page containing the image primary drawn (*column 2, lines 9-28, wherein the blank pages corresponding to no image primary drawn are not output and a page containing an image primary drawn are output*).

Nishii does not expressly disclose an extracting unit generating a binary image from image data for each of a plurality of pages and extracting fragment images having continuous

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pixels from the binary image, determining unit to determine whether or not each of the extracted fragment images is an image primary drawn on each of the pages based on a basis of characteristics of the extracted fragments, the determining unit determines that an extracted fragment image is a character image and the image primary drawn when the extracted fragment image has a size of a character, and the size is within a predetermined range of height and width and depends on a read resolution and a font size.

However, Bloomberg discloses an image processing apparatus comprising:

extracting unit generating a binary image from image data for each of a plurality of pages (*column 4, lines 40-57*) and extracting fragment images having continuous pixels from the binary image (*column 5, lines 14-16 and column 6, lines 18-20, wherein connected ON pixels or connected components correspond to fragment images having continuous pixels*);

determining unit to determine whether or not each of the extracted fragment images is an image primary drawn on each of the pages based on a basis of characteristics of the extracted fragments (*column 5, lines 16-20, wherein it is determined whether or not an image of a page is blank corresponding to determining whether or not an image of a page is an image primary drawn on the page, the determination is made based on the number and size of connected pixels*).

the determining unit determines that an extracted fragment image is a character image and the image primary drawn when the extracted fragment image has a size of a character, and the size is within a predetermined range of height and width and depends on a read resolution and a font size (*column 5, line 65 – column 52, wherein Bloomberg discloses that the read resolution of the image is reduced by preferably 16x and that the font size of a character is 4 or sometimes 8 connected components, so a fragment image with a height or width equal to that*

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which provides 4 or 8 connected components or pixels is considered a character and therefore the page is not blank).

Nishii & Bloomberg are combinable because they are from art of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the extracting unit and determining unit, as taught by Nishii, with the image processing apparatus disclosed by Bloomberg.

The suggestion/motivation for doing so would have been to provide a robust technique for quickly determining a blank page (Nishii, column 1, lines 40-44).

Therefore, it would have been obvious to combine Bloomberg with Nishii to obtain the invention as specified in claim 1.

As to claim 3, the combination of Nishii and Bloomberg disclose the image processing apparatus according to claim 1, wherein the determining unit further determines whether or not each of the extracted fragment images is an image primarily drawn based on a size of the extracted fragment images (*Bloomberg, column 5, lines 14-16*).

As to claim 5, the combination of Nishii and Bloomberg disclose the image processing apparatus according to claim 1, wherein the determining unit further determines that an extracted fragment image is not the image primarily drawn when the extracted fragment image has characteristics corresponding to a filing hole of an original (*Bloomberg, column 6, lines 4-8*).

As to claim 6, the combination of Nishii and Bloomberg disclose the image processing apparatus according to claim 1, wherein the determining unit further determines that an extracted fragment image is not the image primary drawn when the extracted fragment image has characteristics that can appear in a margin of an original during reading (*Bloomberg, column 5, lines 5-10*).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nishii and Bloomberg as applied to claim 1 above, and further in view of USPN 7,057,595 to Benyoub et al. (“Benyoub”).

As to claim 2, the combination Nishii and Bloomberg discloses the image processing apparatus according to claim 1.

The combination of Nishii and Bloomberg does not disclose expressly wherein the extracting unit includes a generating unit generating binary data from multi-valued image data, and the generating unit binarizes a pixel of interest based on at least a relative difference in density between the pixel of interest and adjusting pixels.

However, Benyoub discloses an extracting unit further comprises generating unit generating binary data from multi-valued image data, and the generating unit binarizes a pixel of interest based on at least a relative difference in density between the pixel of interest and adjusting pixels (column 3, line 64 – column 4, line 50).

Nishii, Bloomberg & Benyoub are combinable because they are from the same art of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the generating unit, as taught by Benyoub, with the image processing apparatus disclosed by the combination of Nishii and Bloomberg.

The suggestion/motivation for doing so would have been provide a quality conversion process of an image to a binary image (Benyoub, column 1, lines 46-63).

Therefore, it would have been obvious to combine Nishii and Bloomberg with Benyoub to obtain the invention as specified in claim 2.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON W. CARTER whose telephone number is (571)272-7445. The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron W Carter/
Primary Examiner, Art Unit 2624